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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,198	01/23/2004	Ken Gary Pomaranski	200312917-1	8088

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EXAMINER	
LOHN, JOSHUA A	
ART UNIT	**PAPER NUMBER**
2114	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/22/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/764,198	POMARANSKI ET AL.
	Examiner	Art Unit
	Joshua A. Lohn	2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-20* is/are rejected.

7)☒ Claim(s) *21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/11/06*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 10/4/2006 have been fully considered but they are not fully persuasive.

With respect to applicant's argument, involving claims 9, 15, 18, 19, and 20 that Scrandis alone fails to disclose "a cluster of interconnected computer system that is used as a single computing unit", the examiner agrees, however this claim is rejected under the newly provided rejection of Scrandis in view of the Microsoft Computer Dictionary provided below.

With respect to applicant's arguments, involving claims 1, 3-7, 10-14, and 16, that Scrandis fails to disclose a computing cluster service "for managing the cluster of interconnected computer systems as a single system", the examiner respectfully disagrees. The examiner feels that the distributed intelligence of the monitor of Scrandis acts as a service for managing the interconnected computers as a single system, where this single system is the network itself, and each monitored aspect is merely a part of this greater system (Scrandis, col. 3, lines 18-30). Furthermore, the proper combination with Jackson provides additional teachings of clustered operations with an overall management scheme (Jackson, col. 3, lines 23-30).

With respect to applicant's arguments, involving claims 1, 3-7, 10-14, and 16, that Jackson does not teach at least three states, this argument is moot. The three states are clearly taught by Scrandis and the proper combination with Jackson is merely to provide additional error reporting mechanisms, as is shown in the rejection below.

With respect to applicant's arguments, involving claims 1, 3-7, 10-14, and 16 that Scrandis and Jackson come from different technical fields, and are thus unable to be combined,

the examiner respectfully disagrees. Scrandis pertains to communication networks and Jackson pertains to computing clusters. Since computing clusters are merely a specialized form of communication network, the teachings of Jackson would clearly fall within the broader field of Scrandis, which discloses a desire to support conventional communication networks, Scrandis, col. 3, lines 5-11. Evidence of this common field of technology is provided in the Microsoft Computer Dictionary, 5th edition, page 104, where a cluster is defined as "a group of independent network servers… enabling the servers within a cluster to shift work" clearly shows that a cluster is a communication network of servers.

With respect to applicants argument, involving claim 8, that Liang and Jackson cannot be combined because they come from different technical fields, the examiner respectfully disagrees. Liang pertains to a monitoring servers across data networks, and Jackson pertains to cluster monitoring and management. It is clear from the above definition of clusters the servers of the data network are in the same field of endeavor as the cluster of Jackson.

With respect to applicant's argument, involving claim 17 that Scrandis and Liang fail to disclose "a cluster of interconnected computer system that is used as a single computing unit", the examiner agrees, however this claim is rejected under the newly provided rejection of Scrandis and Liang in view of the Microsoft Computer Dictionary provided below.

In view of the arguments, claims 1 and 2-20 remain rejected as follows.

Claim Objections

Claims 3 and 6 are objected to because of the following informalities: the claims depend from cancelled claim 2, when they should depend from claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scrandis et al., United States Patent number 6,694,455, filed July 27, 2000 in view of Jackson et al., United States Patent number 6,536,000, published March 18, 2003.

As per claim 1, Scrandis discloses a node (Scrandis, col. 7, lines 25-30, where the network element processor is the node) of a high-availability cluster of interconnected computer system, the computer system comprising: a memory system including an operating system which provides a clustering service for managing the cluster of interconnected computer systems as a single system (Scrandis, col. 7, lines 58-60, where the status information is stored in a memory system, that includes an operating system that allows for this action; and col. 3, lines 18-30, where the interconnected is managed as a single system by the distributed intelligence, and the single system is the network taken as a whole which is fully monitored); storing multi-state status data for nodes (Scrandis, col. 7, lines 62-64); an input port configured to receive signals representing multi-state status data of another node (Scrandis, col. 7, lines 62-64); and an output port configured to send signals representing the multi-state status data of the node (Scrandis, col.

7, lines 59-61), wherein the multi-state status data of the node includes at least three states (Scrandis, col. 8, lines 32-36). Scrandis fails to disclose the use of a first and second register in the storing of the status data.

Jackson discloses the use of a first register for storing status data (Jackson, col. 3, lines 23-44, where an error register is the first register) and a second register (Jackson, col. 3, lines 23-44, where there is an error register to correspond to each other processor).

It would have been obvious to one skilled in the art at the time of the invention to use the registers of Jackson in the invention of Scrandis.

This would have been obvious because the error registers of Jackson provide greater efficiencies to provide error information directly to the processes that need the information without the information first having to be processed by the operating system (Jackson, col. 3, liens 23-44). The registers of Jackson, provided for each processor (Jackson, col. 3, lines 23-44), would have provided the obvious benefit of improved efficiency in the multi processor cluster of Scrandis (Scrandis, col. 7, lines 57-67).

As per claim 3, Scrandis and Jackson further disclose the computer system of claim 1, wherein the multi-state status data of the other node further includes a no signal state (Scrandis, col. 7, lines 64-67, where when only identification information is being exchanged it includes no operating status signal state).

As per claim 4, Scrandis and Jackson further disclose the computer system of claim 1, wherein the at least three states includes a good level, a bad level, and a degraded level

(Scrandis, col. 8, lines 32-36, where the degraded and failed states are the degraded and bad levels).

As per claim 5, Scrandis and Jackson further disclose the computer system of claim 1, wherein the at least three states includes a good level, a bad level, and multiple levels of degradation (Scrandis, col. 8, lines 32-36, where the degraded and failed states are the multiple levels of degradation).

As per claim 6, Scrandis and Jackson further disclose the computer system of claim 1, wherein the input and output ports each couple to a point-to-point communication path for communicating the status data between nodes of the cluster (Scrandis, col. 7, lines 31-38).

As per claim 7, Scrandis and Jackson further disclose the computer system of 1, further comprising a rule file and an operating system, wherein the operating system applies rules from the rule file to determine the multi-state status of the node (Scrandis, col. 19, lines 30-44, where the correlation check is the rule file used to detect the alarm status of the node).

Claims 9, 15, and 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Scrandis et al., in view of Microsoft Computer Dictionary, 5th edition, published 2002, cluster and clustering entries, pages 104-105, hereinafter Microsoft.

As per claim 9, Scrandis discloses a method of status reporting for a node of a cluster, the method comprising applying a set of rules to determine current multi-state status of the node (Scrandis, col. 19, lines 30-44, where the alarm correlation check is used as a set of rules to detect the alarm status), wherein states of the multi-state status includes a good state, a bad state, and at least one degraded state (Scrandis, col. 8, lines 32-36). Scrandis fails to explicitly state that the node cluster is an interconnected computer system that is used as a single computing unit.

Microsoft discloses that a cluster is a group of computer system used as a single unit (Microsoft, page 105).

It would have been obvious to one skilled in the art at the time of the invention to use the cluster of Microsoft in the system of Scrandis.

This would have been obvious because Scrandis shows a desire to be compatible with conventional communications networks with a plurality of network elements conveying information (Scrandis, col. 3, liens 7-11). Microsoft shows just such a communications network in the form of a cluster (Microsoft, page 104, definition 4 of cluster). It would have been obvious to further the compatibility desires of Scrandis by including support for the specific cluster type of Microsoft.

As per claim 15, Scrandis and Microsoft further disclose the method of claim 9, wherein the multi-state status of the node includes multiple levels of degradation (Scrandis, col. 8, lines 32-36, where the degraded and failed status values are the multiple levels of degradation).

As per claim 18, Scrandis discloses an apparatus for reporting status from a node of a cluster, the apparatus comprising: a processor for executing instructions (Scrandis, col. 7, lines 24-25); memory for holding data (Scrandis, col. 7, lines 59-60, where the storage ability indicates the memory for holding data); system interconnect to provide intercommunication between components of the apparatus (Scrandis, col. 7, lines 31-39); a software module that is configured to apply a set of rules to determine current multi-state status of the node (Scrandis, col. 19, lines 30-44); and signaling hardware configured to output the multi-state status of the node (Scrandis, col. 19, lines 40-44), wherein states of the multi-state status includes a good state, a bad state, and at least one degraded state (Scrandis, col. 8, lines 32-36). Scrandis fails to explicitly state that the node cluster is an interconnected computer system that is used as a single computing unit.

Microsoft discloses that a cluster is a high-availability computing cluster that is used as a single computing unit (Microsoft, page 105).

It would have been obvious to one skilled in the art at the time of the invention to use the cluster of Microsoft in the system of Scrandis.

This would have been obvious because Scrandis shows a desire to be compatible with conventional communications networks with a plurality of network elements conveying information (Scrandis, col. 3, liens 7-11). Microsoft shows just such a communications network

in the form of a cluster (Microsoft, page 104, definition 4 of cluster). It would have been obvious to further the compatibility desires of Scrandis by including support for the specific cluster type of Microsoft.

As per claim 19, Scrandis and Microsoft further disclose the apparatus of claim 18, wherein the signaling hardware is further configured to receive as input the multi-state status from another node of the cluster (Scrandis, col. 7, lines 61-64).

As per claim 20, Scrandis and Microsoft further disclose the apparatus of claim 19, wherein the multi-state status includes multiple levels of degradation (Scrandis, col. 8, lines 32-36, where degraded and failed are the multiple levels of degradation).

Claims 10-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scrandis in view of Microsoft in further view of Jackson.

As per claim 10, Scrandis and Microsoft discloses the writing of multi-state status information to the node (Scrandis, col. 7, lines 58-60). Scrandis and Microsoft however fail to disclose that the writing is directed to a register.

Jackson discloses the use of the register (Jackson, col. 3, lines 23-44).

It would have been obvious to one skilled in the art at the time of the invention to use the registers of Jackson in the invention of Scrandis.

This would have been obvious because the error registers of Jackson provide greater efficiencies to provide error information directly to the processes that need the information without the information first having to be processed by the operating system (Jackson, col. 3,

liens 23-44). The registers of Jackson, provided for each processor (Jackson, col. 3, lines 23-44), would have provided the obvious benefit of improved efficiency in the multi processor cluster of Scrandis (Scrandis, col. 7, lines 57-67).

As per claim 11, Scrandis, Microsoft and Jackson further disclose the method of claim 10, further comprising: driving the multi-state status (Scrandis, col. 7, lines 59-61) from the first register (Jackson, col. 3, lines 23-44) to a next node via a point-to-point communications path (Scrandis, col. 7, lines 30-37, where the service channel is the point-to-point communication path).

As per claim 12, Scrandis, Microsoft and Jackson further disclose the method of claim 11, further comprising: receiving multi-state status from another node; and writing the multi-state status from the other node (Scrandis, col. 7, lines 62-65) to a second register (Jackson, col. 3, lines 23-44, where there is an error register to correspond to each other processor).

As per claim 13, Scrandis, Microsoft and Jackson further disclose the method of claim 12, further comprising: reading the statuses from the first and second registers; and taking action to maintain high availability of the cluster based on the statuses read (Scrandis, col. 19, lines 30-44, where all the status information is compared to determine if the high availability alarm action needs to be taken).

As per claim 14, Scrandis, Microsoft and Jackson further disclose the method of claim 11, wherein the status writable into the second register includes a no signal state (Scrandis, col. 7, lines 64-67, where if only identification information is sent, no status signal state is registered).

As per claim 16, Scrandis, Microsoft and Jackson further disclose the method of claim 12, wherein the multi-state status from the other node includes multiple levels of degradation (Scrandis, col. 8, liens 32-36, where the degraded and failed states are the multiple levels of degradation).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scrandis in view of Jackson in further view of Liang, United States Patent number 6,738,811, filed March 31, 2000.

As per claim 8, Scrandis and Jackson disclose using rules to determine the system state (Scrandis, col. 19, lines 30-44, where the correlation check is the rule file used to detect the alarm status of the node). Scrandis and Jackson fail to disclose that the system includes a rule such that receipt of a critical chassis code results in a bad state and another rule such that receipt of a chassis code below critical results in a degraded state.

Liang discloses a rule such that the receipt of a critical chassis code results in a bad state and another rule such that receipt of a chassis code below a critical results in degraded state (Liang, col. 8, lines 32-48) where the bad state is the state when a rise in temperature is abnormal and where the degraded state is the state when historical data suggests that the current temperature will soon lead to a failure).

It would have been obvious to one skilled in the art at the time of the invention to include the degraded and bad state designations of Liang in the invention of Scrandis and Jackson.

This would have been obvious because Scrandis discloses a desire to have the ability to differentiate between bad and degraded states for monitoring, without specifying a substantial mechanism for this (Scrandis, col. 8, lines 32-40). This desire is satisfied by the mechanism of Liang, which provides a mechanism for differentiating between bad states and degraded states (Liang, col. 8, lines 31-48).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scrandis in view of Microsoft in further view of Liang.

As per claim 17, Scrandis and Microsoft disclose using rules to determine the system state (Scrandis, col. 19, lines 30-44, where the correlation check is the rule file used to detect the alarm status of the node). Scrandis and Microsoft fail to disclose that the system includes a rule such that receipt of a critical chassis code results in a bad state and another rule such that receipt of a chassis code below critical results in a degraded state.

Liang discloses a rule such that the receipt of a critical chassis code results in a bad state and another rule such that receipt of a chassis code below a critical results in degraded state (Liang, col. 8, lines 32-48) where the bad state is the state when a rise in temperature is abnormal and where the degraded state is the state when historical data suggests that the current temperature will soon lead to a failure).

It would have been obvious to one skilled in the art at the time of the invention to include the degraded and bad state designations of Liang in the invention of Scrandis.

This would have been obvious because Scrandis discloses a desire to have the ability to differentiate between bad and degraded states for monitoring, without specifying a substantial

mechanism for this (Scrandis, col. 8, lines 32-40). This desire is satisfied by the mechanism of Liang, which provides a mechanism for differentiating between bad states and degraded states (Liang, col. 8, lines 31-48).

Allowable Subject Matter

Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua A. Lohn whose telephone number is (571) 272-3661. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAL

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SUPERVISORY PATENT EXAMINER